WHAT IS CLAIMED IS:

1. A method which comprises parenterally administering to a mammal a substantially non-aqueous composition of matter comprising:
somatotropin (ST) and a pH-adjusting constituent (PAC);

wherein the PAC is present in an amount effective to maintain the pH of the composition of matter at or near to the isoelectric point (pI) of the ST, at such time as the composition of matter becomes aqueous; and

wherein the somatotropin and the PAC are suspended in a substantially non-aqueous hydrophobic carrier.

2. The method of claim 1 wherein the somatotropin (ST) is present in the composition at from about 10% to about 60%, by weight; the pH-adjusting constituent (PAC) is present in an amount effective to maintain the pH of the composition of matter within about 1.0 pH units of the isoelectric point of the ST; and the substantially non-aqueous hydrophobic carrier is present at from about 30% to about 90%, by weight.

3. The method of claim 1 wherein the somatotropin (ST) is present in the composition at from about 20% to about 55%, by weight; the pH-adjusting constituent (PAC) is present in an amount effective to maintain the pH of the composition of matter within about 0.5 pH units of the isoelectric point of the ST; and the substantially non-aqueous hydrophobic carrier is present at from about 40% to about 80%, by weight.

4. The method of claim 1 wherein the somatotropin (ST) is an N-alanyl-ST or an N-methionyl-ST present in the composition at from about 20% to about 55%, by weight;

the pH-adjusting constituent (PAC) is comprised of one or more of the following: acetic acid, phosphoric acid, monobasic phosphate, and histidine-HCl;

wherein the PAC is present in an amount effective to maintain the pH, of the composition of matter within about 0.5 pH units of the isoelectric point of the ST; and

wherein the substantially non-aqueous hydrophobic carrier is present at from about 40% to about 80%, by weight; wherein the non-aqueous hydrophobic carrier is comprised of about 95% to 100% sesame oil and, optionally, up to about 5% aluminum monostearate.

5. The method of 1 wherein the composition of matter is parenterally administered to the mammal in order to induce improved weight gain or elevated milk production in the mammal.

6. The method of claim 1 wherein the somatotropin (ST) is an N-methionyl-ST or N-alanyl-ST.

7. The method of claim 1 wherein the somatotropin (ST) is human, equine, bovine, or porcine somatotropin.

8. The method of claim 7 wherein the somatotropin (ST) is human or bovine somatotropin.

9. The method of claim 1 wherein the pH-adjusting constituent is selected from one or more of the following compounds: acetic acid, phosphoric acid, monobasic phosphate and histidine-HCl.

10. The method of claim 1 wherein the pH-adjusting constituent is present in an amount effective to maintain the pH of a the composition of matter within about 1.0 pH

units of the isoelectric point (pI) of the ST.

11. The method of claim 10 wherein the pH-adjusting constituent is present in an amount effective to maintain the pH of the composition of matter within about 0.5 pH units of the isoelectric point (pI) of the ST.

12. The method of claim 1 wherein the substantially non-aqueous hydrophobic carrier comprises an oil or a fat.

13. The composition of matter of claim 12 wherein the hydrophobic carrier comprises sesame oil and aluminum monostearate.

14. The method of claim 13 wherein the hydrophobic carrier is comprised of about 95%, sesame oil and about 5% aluminum monostearate.

15. The method of claim 1 wherein the substantially non-aqueous hydrophobic carrier is present at from about 30% to about 90% by weight, of the composition.

16. The method of claim 15 wherein the substantially non-aqueous hydrophobic carrier is present from about 40% to about 80% by weight, of the composition.

17. The method of claim 1 wherein the somatotropin is present at from about 10% to about 60% by weight.

18. The method of claim 17 wherein the somatotropin is present at from about 20% to about 55% by weight.

19. The method of claim 1 wherein the pH-adjusting constituent is present from about 0.1 to about 10% by weight, of the composition.

20. The method of claim 19 wherein the pH-adjusting constituent is present from about 0.2 to about 5% by weight.

21. The method of claim 1, wherein the somatotropin is N-alanyl bovine somatotropin or N-methionyl bovine somatotropin present at from about 20% to about 55%, by weight; and

wherein the pH-adjusting constituent is present in an amount effective to maintain the pH, of the composition of matter within about 0.5 pH units of the isoelectric point (pI) of the ST.

22. A method for sustaining elevated milk production response in a lactating mammal comprising:

parenterally administering to the mammal a substantially non-aqueous, biocompatible composition of matter comprising:

a somatotropin (ST), active in the mammal, and a pH-adjusting constituent (PAC);

wherein the PAC is present in an amount effective to maintain the pH of the composition of matter at or near to the isoelectric point (pI) of the ST, at such time as the composition of matter becomes aqueous;

wherein the PAC comprises one or more of the following: acetic acid, phosphoric acid, monobasic phosphate, and histidine HCl; and

wherein the somatotropin and the PAC are suspended in a substantially non-aqueous hydrophobic carrier.